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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,812	08/24/2001	Charles Lelievre	71062.P004	1087

25943 7590 05/21/2004

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EXAMINER

LEE, JOHN J

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/938,812	Applicant(s) LELIEVRE ET AL.	
	Examiner JOHN J LEE	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1 – 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dowling et al. (US Patent number 6,522,875) in view of Dennison et al. (US Patent number 6,324,404).

Regarding **claim 1**, Dowling discloses that method of providing a location-based service (Fig. 1 and abstract). Dowling teaches that creating a database of broadcast radio stations (Fig. 1, 2 and column 11, lines 26 – 65, where teaches a memory module operative to hold a list (one or more entries, broadcasting stations) is provided within the control module). Dowling teaches that maintaining, for each broadcast radio station, a schedule of program information (Fig. 1, 2, column 10, lines 62 – column 11, lines 25, and column 4, lines 31 – 62, where teaches maintaining network connection for can access a scheduling program). Dowling teaches that maintaining for each broadcast radio station (maintaining the network connection see column 4, lines 31 – 62), geographic boundary information (column 8, lines 57 – column 9, lines 2 and Fig. 1, where teaches performing comparisons of GPS coordinate information with pre-specified boundary information) that defines a boundary within which a pre-determined boundary condition pattern is found (column 15, lines 12 – 42 and Fig. 1, where teaches when the mobile unit

crosses a boundary and enters a region within a locality, this has the same effect as if the decisions were both affirmative and the comparison may be performed by subtracting from a set of reference coordinates a set of coordinates representative of the geographical location of the mobile unit and testing to see whether the difference is below a threshold).

Dowling does not exactly disclose the limitation “defines a boundary within which a pre-determined boundary condition pattern is found”. However, Dennison more specifically discloses the limitation “defines a boundary within which a pre-determined radiated energy pattern is found” (Fig. 13, 15 and column 15, lines 10 – 47, where teaches the signal strength value will be weaker, poorer for the service as close to the border but it will be found that higher values at the borders can be maintained which results in better service). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Dowling system as taught by Dennison, provide the motivation to improve providing services based on location, specifically at the boundary in cellular communication system.

Regarding **claim 2**, Dowling discloses that the program information includes a program classification code (column 8, lines 17 – 25, Fig. 1, and column 18, lines 36 – 54).

Regarding **claim 3**, Dowling discloses that receiving, from a location-aware product, information representative of the geographic position of the location-aware product to within a pre-determined accuracy (column 4, lines 47 – column 5, lines 18 and Fig. 1, 7). Dowling discloses that receiving from the location-aware product one or more program classification codes (column 8, lines 17 – 25, Fig. 1, and column 18, lines 36 –

54). However, Dowling does not specifically disclose the limitation “communicating one or more station tuning codes to the location-aware product wherein the tuning codes are associated with broadcast radio stations”. However, Dennison discloses the limitation “communicating one or more station tuning codes to the location-aware product wherein the tuning codes are associated with broadcast radio stations” (column 9, lines 17 – 58 and Fig. 6, 11, where teaches a response from mobile unit includes the location information, and designated control channel instructs the mobile unit to tune to one of channels after received the turning channel (code)). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Dowling system as taught by Dennison, provide the motivation to achieve quality reception of cellular services based on precise position in cellular communication system.

Regarding **claims 4 and 5**, Dowling discloses that receiving sensitivity data from the location-aware product (column 12, lines 32 – column 13, lines 22 and Fig. 13).

Regarding **claim 6**, Dowling discloses that receiving model information from the location-aware product (column 12, lines 32 – column 13, lines 22 and Fig. 13).

Regarding **claims 7 and 8**, Dowling and Dennison disclose all the limitation, as discussed in claims 1 and 3. Furthermore, Dowling further teaches that determining is based, at least in part, on one or more sensitivity characteristics of the location-aware product (column 12, lines 32 – column 13, lines 22 and Fig. 13).

Regarding **claim 9**, Dowling and Dennison disclose all the limitation, as discussed in claims 3 and 7. Furthermore, Dowling further teaches that one or more

sensitivity or selectivity characteristics being derived from the model information (column 12, lines 32 – column 13, lines 22 and Fig. 13).

Regarding **claim 10**, Dowling discloses that the location-based services provider derives the sensitivity or selectivity information from the model information by accessing a database (column 10, lines 10 – column 11, lines 25 and Fig. 1).

Regarding **claim 11**, Dowling and Dennison disclose all the limitation, as discussed in claims 3 and 9.

Regarding **claim 12**, Dowling and Dennison disclose all the limitation, as discussed in claims 3 and 9. However, Dowling does not specifically disclose the limitation “determining which one or more station tuning codes to communicate to the location-aware product based, at least in part, on the geographic position and the time of day at the geographic position”. However, Dennison discloses the limitation “determining which one or more station tuning codes to communicate to the location-aware product based, at least in part, on the geographic position and the time of day at the geographic position” (column 11, lines 62 – column 13, lines 20 and Fig. 8, 9). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Dowling system as taught by Dennison, provide the motivation to achieve efficient providing cellular services based on location for users in cellular communication system.

Regarding **claim 13**, Dowling and Dennison disclose all the limitation, as discussed in claim 1. Furthermore, Dowling further discloses that providing a frequency assignment to each of a plurality of user input interfaces, each assignment based, at least

in part, on a first geographical zone (abstract, Fig. 1, and column 4, lines 3 – 30, where teaches mobile station enters the first network area and connects with the control server by receiving auxiliary channel). Dowling teaches that determining whether a present location of the location-aware mobile radio is within a second geographical zone (column 10, lines 62 – column 11, lines 54 and Fig. 1, 6, where teaches as the mobile unit enters the second geographic area, the GPS receiver system provides a set of geographical positional information). Dowling teaches that providing, if the determination in above limitation is affirmative, a second frequency assignment to at least one of the plurality of user input interfaces (column 10, lines 62 – column 11, lines 54 and Fig. 1, 6).

Regarding **claim 14**, Dowling discloses that the user input interface comprises a button (column 10, lines 49 – 61 and Fig. 2).

Regarding **claim 15**, Dowling discloses that the user input interface comprises a switch (Fig. 2 and column 8, lines 16 – 25).

Regarding **claim 16**, Dowling discloses that the second geographical zone overlaps the first geographical zone (column 1, lines 33 – 57 and Fig. 1).

Regarding **claim 17**, Dowling and Dennison disclose all the limitation, as discussed in claims 1 and 3. Furthermore, Dowling further discloses that a radio adapted to receive and demodulate signals from a plurality of broadcast radio stations (column 7, lines 64 – column 8, lines 56 and Fig. 2), and to produce at least an audio output (column 7, lines 64 – column 8, lines 56 and Fig. 2, where teaches producing speech output). Dowling teaches that a location information resource disposed in a known spatial relationship to the radio (column 10, lines 62 – column 11, lines 54 and Fig. 6, 7).

Dowling teaches that a transceiver (Fig. 2), coupled to the location-information resource, and coupled to the radio, the transceiver adapted to transmit at least an identification code and location information (column 10, lines 62 – column 11, lines 54 and Fig. 2, 6).

Regarding **claim 18**, Dowling discloses that the location information resource comprises a GPS module (abstract, Fig. 1, and column 4, lines 30 – 46).

Regarding **claim 19**, Dowling discloses that a processor coupled to the GPS module, the radio, and the transceiver; and a memory coupled to at least the processor and the radio (Fig. 2 and column 4, lines 30 – 62).

Regarding **claim 20**, Dowling discloses that an interface adapted to physically and electrically couple a cellular telephone to at least the processor (column 1, lines 15 – 47 and Fig. 1).

Regarding **claim 21**, Dowling and Dennison disclose all the limitation, as discussed in claims 1 and 17. Furthermore, Dowling further discloses that obtaining, and retrievably recording in a computer readable format, information regarding a plurality of broadcast stations, including a broadcast station call sign and a carrier frequency, associated with each of the plurality of broadcast stations (column 3, lines 20 – 67 and Fig. 1). Dowling teaches that obtaining, and retrievably recording in a computer readable format, one or more field strength boundaries for each broadcast station in a second plurality of broadcast stations (column 15, lines 12 – 42 and Fig. 1, 3). Dowling teaches that obtaining, and retrievably recording in a computer readable format, programming information for each broadcast station in third plurality of broadcast stations (Fig. 1, 7 and column 19, lines 30 – column 20, lines 10). Dowling teaches that the second plurality

and the third plurality of broadcast stations are each at least a subset of the first plurality of broadcast stations (Fig. 1, 7 and column 19, lines 30 – column 20, lines 10).

Regarding **claim 22**, Dowling and Dennison disclose all the limitation, as discussed in claims 1 and 17. Furthermore, Dowling further discloses that a transmitter operable to transmit a radio signal having a field strength that varies with distance from the transmitter, the field strength of the radio signal is nominally above a predetermined threshold (column 15, lines 12 – 42 and Fig. 1).

Regarding **claim 23**, Dowling discloses that the predetermined threshold is determined such that the radio signal may be adequately received (column 15, lines 12 – 42 and Fig. 1).

Regarding **claim 24**, Dowling and Dennison disclose all the limitation, as discussed in claims 11 and 23.

Regarding **claim 25**, Dowling discloses that a field strength boundary includes temporal limitations (column 20, lines 11 – 40 and Fig. 7).

Regarding **claim 26**, Dowling discloses that the programming information comprises one or more program schedules (Fig. 1 and column 10, lines 62 – column 11, lines 25).

Regarding **claim 27**, Dowling discloses that the programming information comprises one or more station formats (Fig. 7 and column 20, lines 11 – column 21, lines 23).

Regarding **claim 28**, Dowling discloses that the programming information comprises one or more syndicated show schedules (Fig. 1 and column 10, lines 62 – column 11, lines 25).

Regarding **claim 29**, Dowling discloses that the database may be accessed so as to retrieve at least broadcast station carrier frequencies based, at least in part, on the logical union of a program type and radio signal field strength at a particular set of geographical coordinates (column 10, lines 10 - column 11, lines 54 and Fig. 1).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hollenberg (US Patent number 6,091,956) discloses Situation Information System.

Stewart et al. (US Patent number 6,414,635) discloses Geographic-Based Communication Service System with More Precise Determination of a User's Known Geographic Location.

Endo et al. (US Patent number 6,617,980) discloses Broadcasting Type Information Providing System and Travel Environment Information Collecting Device.

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Any inquiry concerning this communication or earlier communications from the
examiner should be directed to **John J. Lee** whose telephone number is **(703) 306-5936**.
He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00
pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, **Nay
Aung Maung**, can be reached on **(703) 308-7745**. Any inquiry of a general nature or
relating to the status of this application should be directed to the Group receptionist
whose telephone number is (703) 305-4700.

J.L.
May 13, 2004

John J Lee


NICK CORSAPO
PATENT EXAMINER